

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

In the Claims:

1. (Currently Amended) An image-capture circuit, comprising:
a digitizer operable to receive a serial analog color signal having a
predetermined sequence of color components wherein each color component
represents a row of pixels of a single color, the digitizer having:
a plurality of channels each operable to receive the serial analog color
signal and to process a respective color component; and
an analog-to-digital converter operable to sequentially receive and digitize
the color components; and
a controller coupled to the digitizer and operable to couple each of the channels
to the analog to digital converter in the predetermined sequence.

2. (Original) The image-capture circuit of claim 1, wherein the digitizer further
includes a multiplexer disposed between the channels and the analog-to-digital
converter, and the controller is further operable to cause the multiplexer to couple the
channels to the analog-to-digital converter in the predetermined sequence.

3. (Original) The image-capture circuit of claim 1, wherein each input channel is
operable to modify the respective color component that it processes.

4. (Original) The image-capture circuit of claim 3, wherein each input channel is
further operable to amplify the respective color component.

5. (Original) The image-capture circuit of claim 3, wherein each input channel is
further operable to offset the respective color component.

6. (Original) The image-capture circuit of claim 1, wherein the controller is further operable to control the digitizer such that the first input channel processes a first color component of the received analog-color signal, the second input channel processes a second color component of the received analog-color signal, and continuing until each color component is individually processed.

7. (Original) The image-capture circuit of claim 1, wherein the digitizer is operable to receive the serial analog color signal in the plurality of channels.

8. (Original) The image-capture circuit of claim 1, wherein the digitizer is further operable to receive a parallel analog-color signal having color components, each channel of the digitizer being operable to receive a respective color component.

9. (Original) The image-capture circuit of claim 1, wherein the controller and the digitizer are formed on a single chip.

10. (Currently Amended) An image-capture circuit, comprising:
a digitizer operable to receive a serial analog color signal having a predetermined sequence of color components, the digitizer having:

a plurality of signal modification channels, one of the channels operable to sequentially modify each of the color components according to a corresponding modification parameter; and

an analog-to-digital converter operable to sequentially receive and digitize the modified color components from the one of the channels; and

a controller coupled to the digitizer and operable to sequentially update the modification parameter to correspond to the color component that the channel is modifying.

11. (Original) The image-capture circuit of claim 10, wherein the modification parameter includes an amplification.

12. (Original) The image-capture circuit of claim 10, wherein the modification parameter includes an offset.

13. (Currently Amended) A scanner, comprising:
a sensor head operable to generate a serial analog-color signal having a predetermined sequence of color components responsive to a scan of an image, each color component representing a row of pixels of a single color; and
an image-capture circuit, including:
a digitizer operable to receive the serial analog color signal and having:
a plurality of channels each operable to receive the serial analog color signal and to process a respective color component; and
an analog-to-digital converter operable to sequentially receive and digitize the color components; and
a controller coupled to the digitizer and operable to couple each of the channels to the analog to digital converter in the predetermined sequence.

14. (Original) The scanner of claim 13, wherein each input channel is coupled to the serial analog-color signal.

15. (Original) The scanner of claim 13, wherein the controller is further operable to synchronize generation of a first color component by the sensor head with the processing of the first color component by a first channel, generation of a second color component by the sensor head with the processing of the second color by a second channel, and continuing until each color component has been generated and processed by a different channel

16. (Original) The scanner of claim 13, wherein the color components include red, green, and blue.

17. (Original) The scanner of claim 13, wherein the scan head is a CIS type.

18. (Currently Amended) A scanner comprising:

a sensor head operable to generate a serial analog-color signal having a predetermined sequence of color components responsive to a scan of an image; and
an image-capture circuit, including:

a digitizer operable to receive the serial analog color signal and having:

a plurality of signal modification channels, one of the channels operable to sequentially modify each of the color components according to a corresponding modification parameter; and

an analog-to-digital converter operable to sequentially receive and digitize the modified color components from the one of the channels; and

a controller coupled to the digitizer and operable to sequentially update the modification parameter to correspond to the color component that the channel is modifying.

19. (Currently Amended) A method for digitizing a serial analog-color signal having a predetermined sequence of ~~multiple~~ color components wherein each color component represents a row of pixels of a single color, the method comprising:

receiving the serial analog color signal on a single input node;

modifying a first one of the color components with a first channel coupled to the input node and digitizing the modified color component during a first time period; and

modifying a second one of the color components with a second channel coupled to the input node and digitizing the modified color component during a second time period that is separate from the first time period.

20. (Currently Amended) A method for digitizing a serial analog-color signal having a predetermined sequence of ~~multiple~~ color components, the method comprising:

setting a modification parameter of a selected one of a plurality of channels to a first predetermined level, modifying a first one of the color components with the channel, and digitizing the modified first component during a first time period; and
 setting the modification parameter of the channel to a second predetermined level, modifying a second one of the color components with the channel, and digitizing the modified second component during a second ~~period of time~~ period that is separate from the first time period.

21. (Currently Amended) An image-capture circuit, comprising:

a plurality of channels each operable to receive an serial analog color signal including a predetermined sequence of color components and to process a respective one of the color components, each color component representing a row of pixels of a single color;

an analog-to-digital converter operable to sequentially receive and digitize the processed color components from the channels; and

~~a controller coupled to the digitizer and~~ operable to couple the channels to the analog-to-digital converter in the predetermined sequence.

22. (Currently Amended) A scanner, comprising:

a sensor head operable to scan an image and to generate an serial analog color signal that represents the image, the signal having a predetermined sequence of color components wherein each color component represents a row of pixels of a single color;

a plurality of channels each operable to receive the serial analog color signal from the sensor head and to process a respective one of the color components;

an analog-to-digital converter operable to sequentially receive and digitize the processed color components from the channels; and

~~a controller coupled to the digitizer and~~ operable to couple the channels to the analog-to-digital converter in the predetermined sequence.

23. (Currently Amended) A method for digitizing an serial analog color signal having a predetermined sequence of color components wherein each color component represents a row of pixels of a single color, the method comprising:

receiving the serial analog color signal ~~with~~ on each of a first and a second channels;

modifying a first one of the color components with the first channel and digitizing the modified first component during a first time period; and

modifying a second one of the color components with the second channel and digitizing the ~~second~~ second modified second component during a second time period that is separate from the first time period.

24. (Currently Amended) The method of claim 23, further comprising:

receiving the serial analog color signal ~~with~~ on a third channel; and

modifying a third one of the color components with the third channel and digitizing the modified third component during a third time period that is separate from the first and second time periods.